



## ABSTRACT

A pirani absolute pressure sensor for sensing absolute pressure in a load lock in a range from 100 to  $10^{-4}$  torr and a differential pressure sensor for sensing a pressure difference between ambient atmospheric pressure and pressure in the load lock chamber are combined together in a module with a manifold and common circuit components to provide a pressure transducer that is capable of producing not only analog output for absolute pressure measurements, but also control signals at settable absolute and differential pressure values for opening interior and exterior doors of a load lock used to shuttle wafers and other devices into and out of a vacuum processing chamber. The transducer can also produce signals to control transition from slow to fast vacuum pumping of the load lock chamber at a settable threshold pressure.